20070 07598860

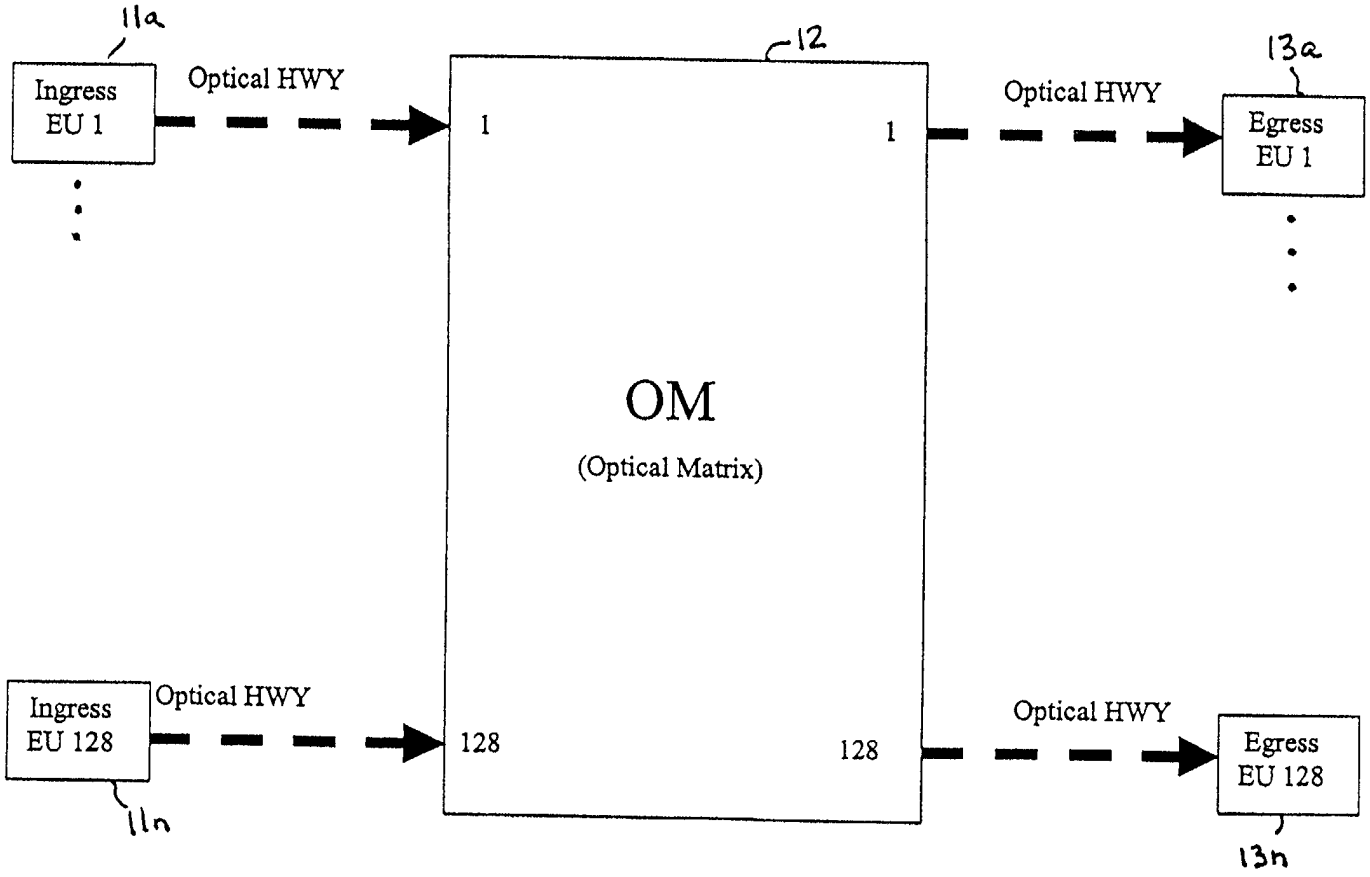


Fig. 1

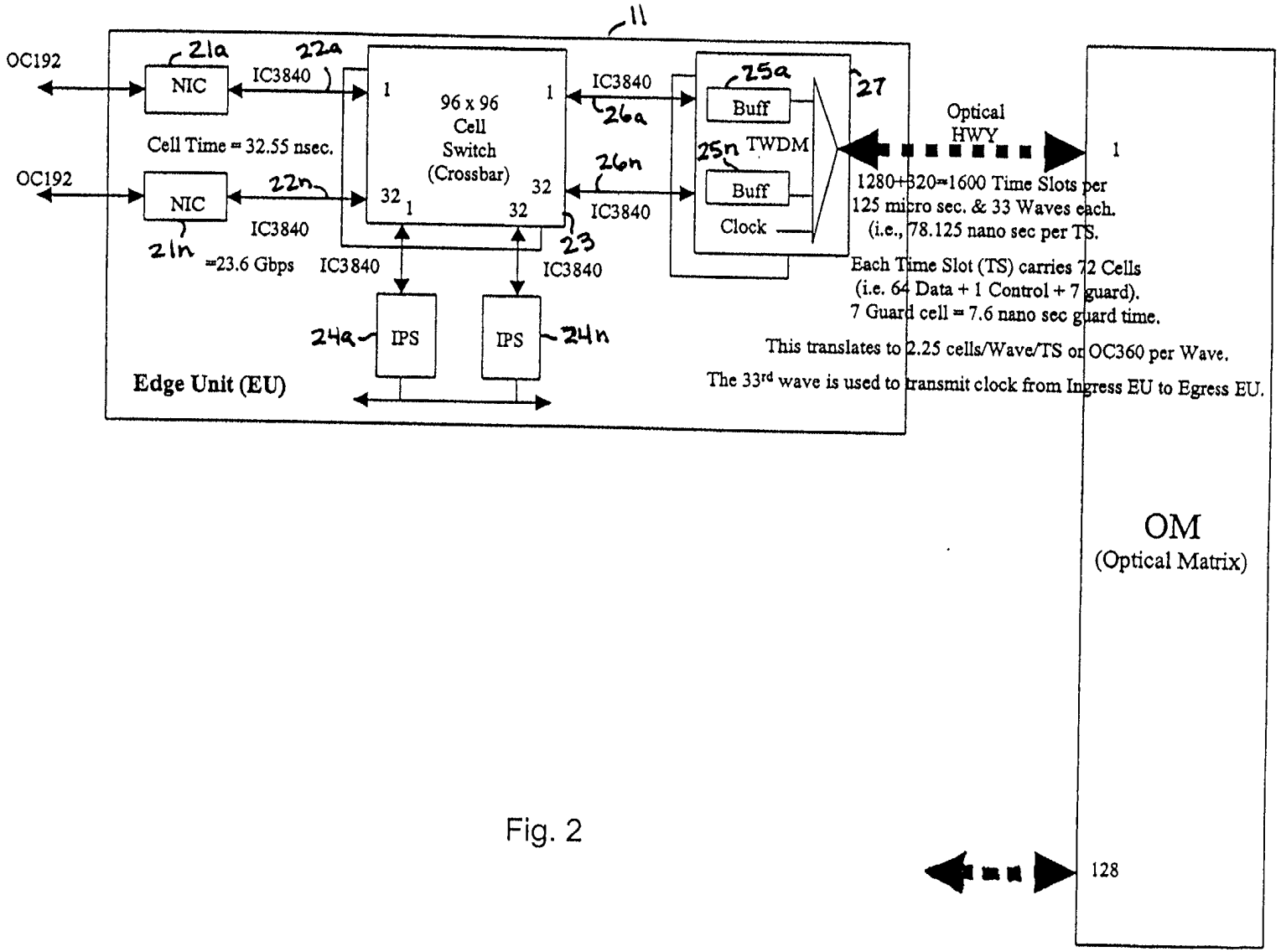
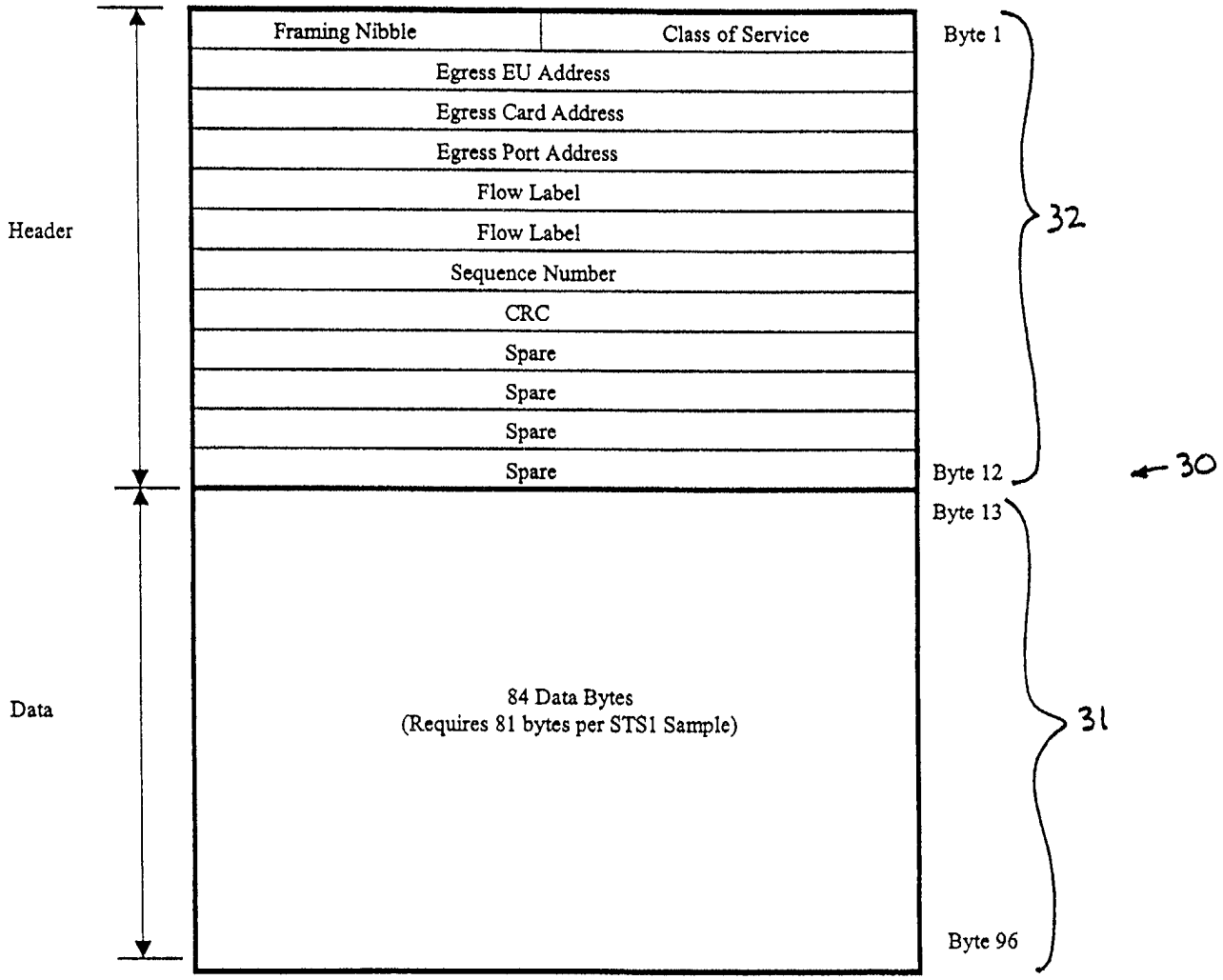

11
OC192
21a
NIC
IC3840
22a
1
96 x 96
Cell
Switch
(Crossbar)
32
1
IC3840
26a
25a
Buff
27
Optical
HWY
1
Cell Time = 32.55 nsec.
OC192
NIC
22n
IC3840
32
1
32
IC3840
26n
25n TWDM
Buff
Clock
23
1280+320=1600 Time Slots per
125 micro sec. & 33 Waves each.
(i.e., 78.125 nano sec per TS.
21n
=23.6 Gbps
IC3840
IC3840
Each Time Slot (TS) carries 72 Cells
(i.e. 64 Data + 1 Control + 7 guard).
7 Guard cell = 7.6 nano sec guard time.
24a
IPS
IPS
24n
This translates to 2.25 cells/Wave/TS or OC360 per Wave.
The 33rd wave is used to transmit clock from Ingress EU to Egress EU.
Edge Unit (EU)
OM
(Optical Matrix)
128

Fig. 2

20STPO 97S98860



Cell Format

Fig. 3

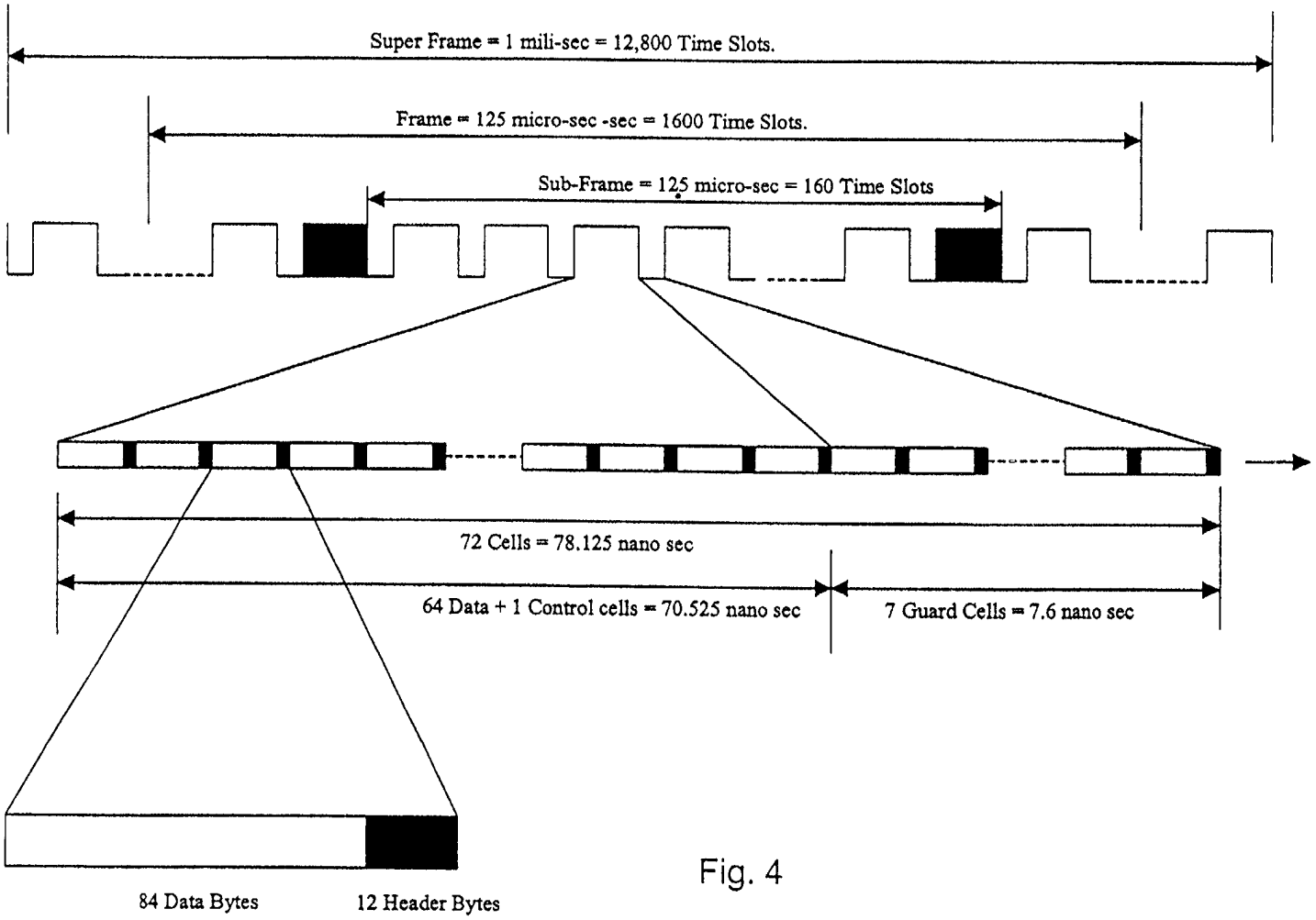
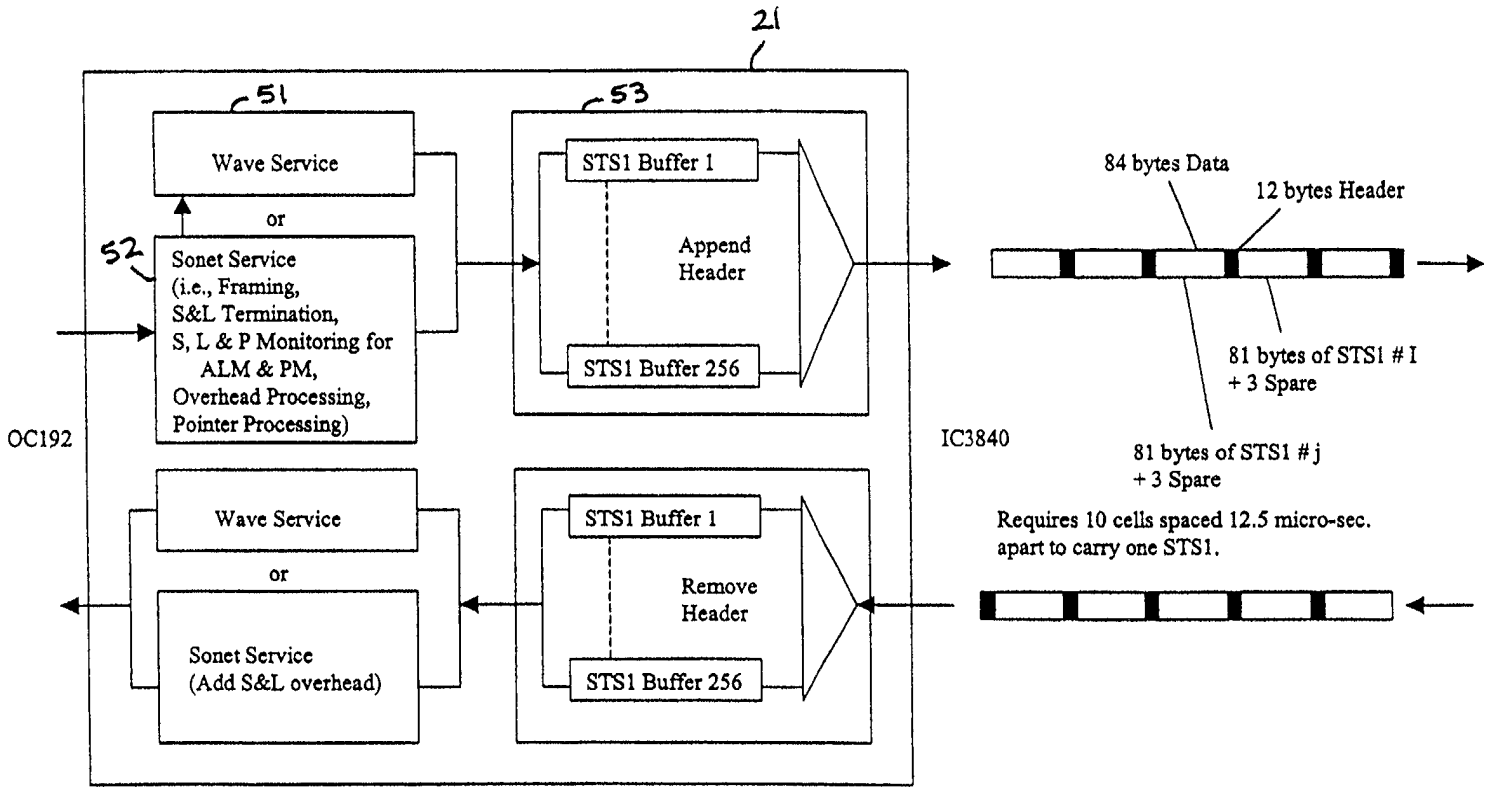

Super Frame = 1 mili-sec = 12,800 Time Slots.
Frame = 125 micro-sec -sec = 1600 Time Slots.
Sub-Frame = 125 micro-sec = 160 Time Slots
72 Cells = 78.125 nano sec
64 Data + 1 Control cells = 70.525 nano sec
7 Guard Cells = 7.6 nano sec
84 Data Bytes
12 Header Bytes

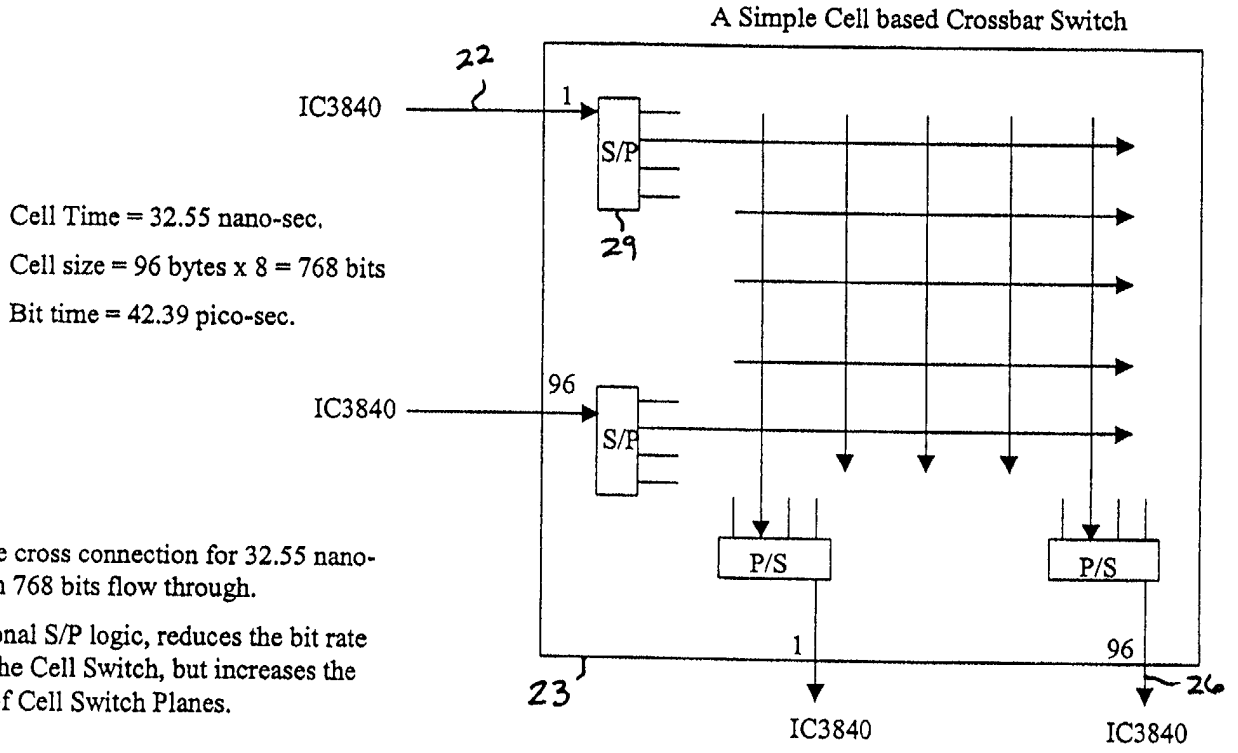
Fig. 4

20010"2159960



Network Interface Card (NIC)

Fig. 5



96 x 96 Cell Switch (CS96)

(Prefer 128 x 128 Cell Switch for Future Services)

Fig. 6

20210 "9159886

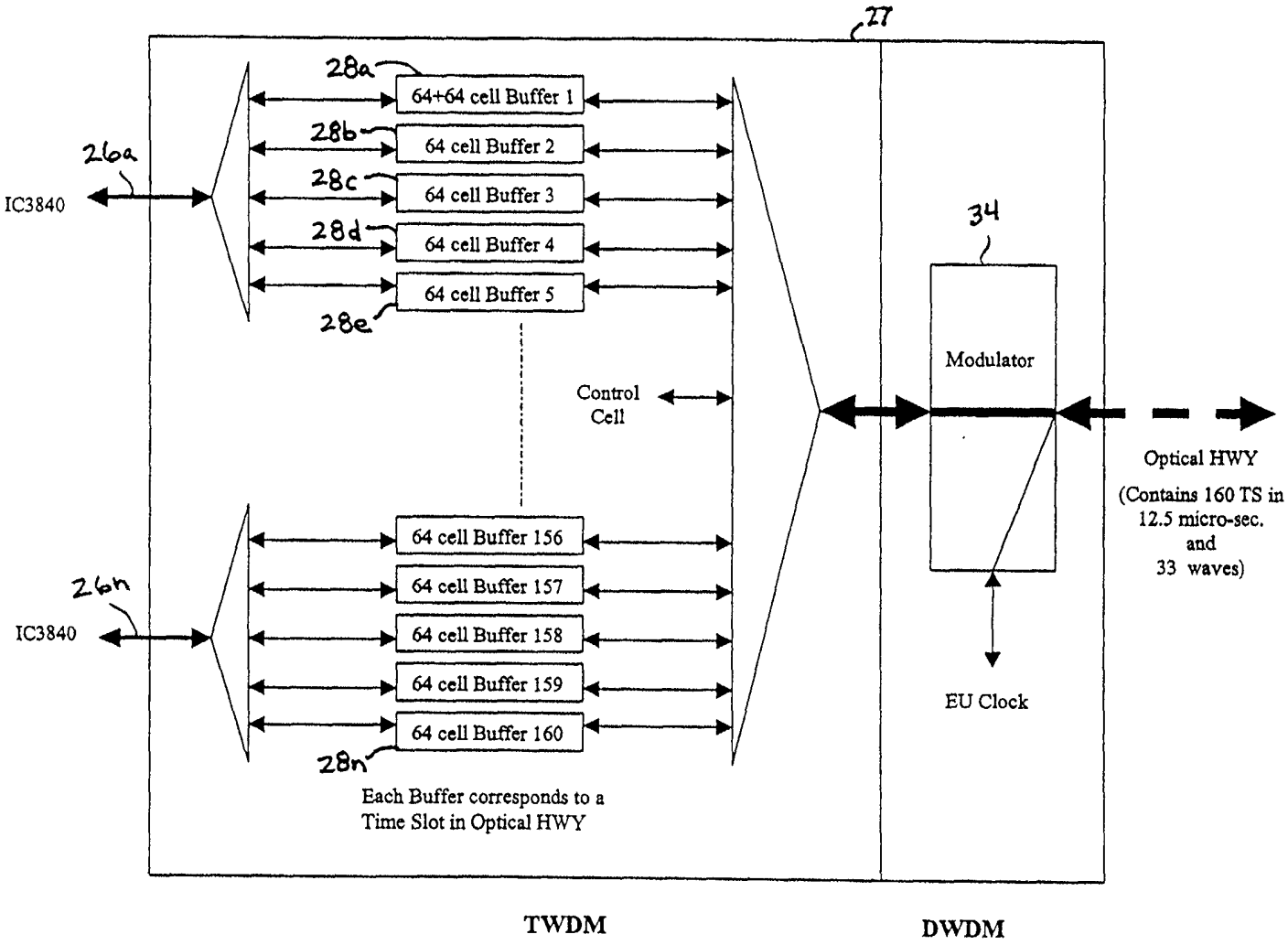
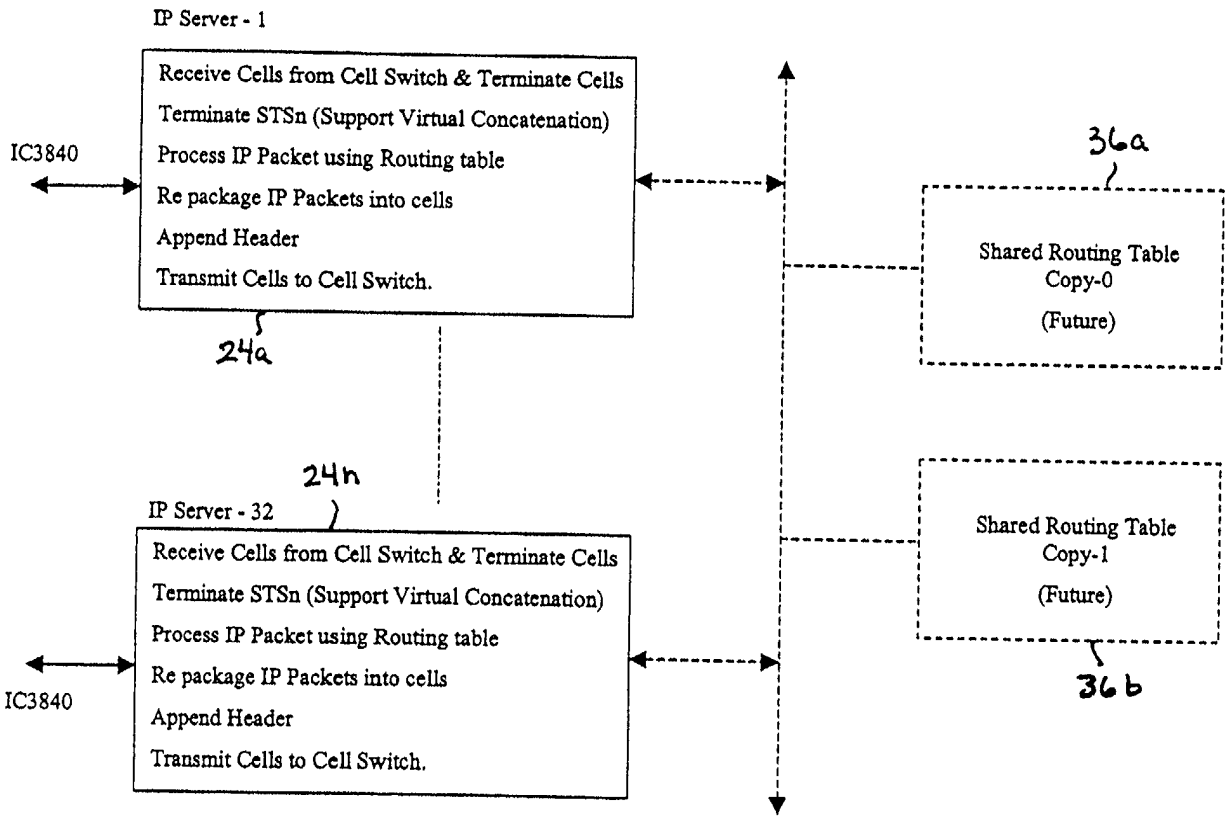


Fig. 7



IP Server (IPS)

Fig. 8

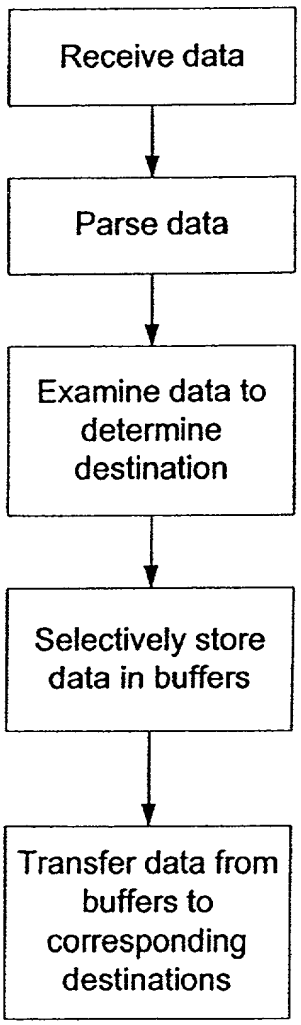

Receive data
Parse data
Examine data to determine destination
Selectively store data in buffers
Transfer data from buffers to corresponding destinations

Fig. 9